



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

649.5213

Job Sheet 171214



Part No: 649.5213

Job Qty: 5 ea

Part Name: Doubler



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 1/30/18

Job Tracking No:

Due Date: 2/28/18

Created By: Michelle Gagnon-Donovan

Type: Stock

Description:

Note: DWG REV A IPP REV:A 13.01.10 NEW ISSUE DD VERF:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	5 Ea		2/27/18	0.00	0.00	Start Up Waterjet		DL 18/02/12
110	Waterjet	5 pcs		2/28/18	0.00	0.24	Waterjet1		DL 18/02/12
120	QC	5 pcs		2/28/18	0.00	0.00	QC2 Waterjet-1		DL 18/02/12
130	QC	5 pcs		2/28/18	0.00	0.00	QC8-1		38
160	Outsource	5 pcs		2/28/18	0.00	0.00	Outsource4		AT 18/02/12
170	Packaging	5 pcs		2/28/18	0.00	0.00	Packaging2		AT 18/02/12
180	QC	5 pcs		2/28/18	0.00	0.00	QC5		38 MAR 02 2018
190	SprayPaint	5 pcs		2/28/18	0.00	0.00	Spray Paint		9.88
200	QC	5 pcs		2/28/18	0.00	0.00	QC14		8 MAR 02 2018
210	Packaging	5 pcs		2/28/18	0.00	0.00	Packaging3-1		8 MAR 02 2018
220	QC21-SA	5 Ea		2/28/18	0.00	0.00	QC21		21 MAR 05 2018

Part Op 110 - 1-Cut as per Dwg Dwg Rev: A Prog Rev: A 2-Deburr if necessary

Descriptions: 160 - ISSUE P/O: 039040 HARD ANODIZE, COLOR BLACK AS PER DWG. (SEE NOTE 2)

190 - PRIME AS PER DWG. (SEE NOTE 2) PRIMER BATCH:

210 - ***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M2024T3S.125	2024-T3 .125 Sheet	.4450 sf (.089 ea)	90-Start up Operation	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	M2024T3S.125	0	92	0

Part Specifications

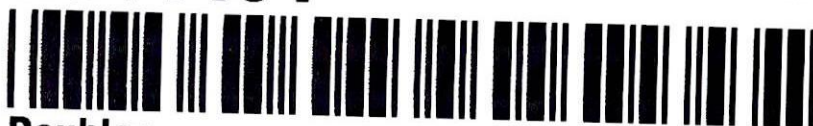
Specifications could not be found.

Plex 1/31/18 10:12 AM Dart.Gagnon.Michelle

A

DART
AEROSPACE
S041401

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com



Doubler

PART NO: 649.5213
Original Serial #: S041401

Revision:

Operation:
Change No:

Start up Operation

02/12/18

Job No: 171214

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER :					

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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OTHER : ☐																					

APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 03696				SHEET 1 OF 1	
	DWG NO. 649.5200	REV: A	PREPARED BY B. PETERS	DATE: 11/14/12	EFFECT ON DWG ☐ INC. ☒ UNINC.	
	DWG TITLE: BRACKET					
	APPROVED BY: ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: NEXT ORDER		
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE	REASON: ADDED ALTERNATE MATERIAL.				ECR: D-12-004	SHOP COPY RETURN TO ENGINEERING UNCONTROLLED COPY SUBJECT TO AMENDMENT WITHOUT NOTICE WORK ORDER NO. 171214 <i>mf</i>

SHEET 1, ZONE A2 IS:

IS

1 MATERIAL: 7075-T651 ALUMINUM PER AMS-QQ-A-250/12.

IS

1 ALTERNATE MATERIAL: 0.125 INCH THICK 2024-T3 ALUMINUM SHEET METAL.
8 ALTERNATE MATERIAL: 7075-T6511 ALUMINUM PER AMS-QQ-A-200/11.

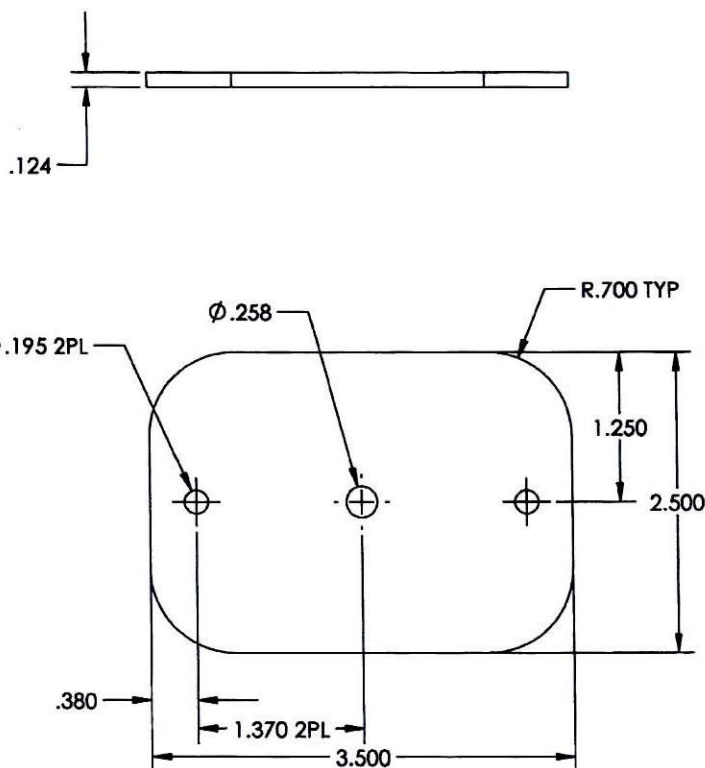
SHEET 1, ZONE B1 IS:

5	R	649.5214			BRACKET	1 8	2 6
4	R	649.5213			DOUBLER	1 7	2
3	R	649.5212			BRACKET	1 8	2 5
2	R	649.5211			SHIM	1 7	2
1	R	649.5210			DOUBLER	1 7	2
F/N	TC	PART NUMBER	QTY		DESCRIPTION	MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED: ☐ RFMS ☐ MDL ☐ INSTALL INSTRUC ☐ ICA ☒ BOM						CHANGE CATEGORY ☐ MAJOR ☒ MINOR	DER REVIEW REQUIRED ☐ YES ☒ NO

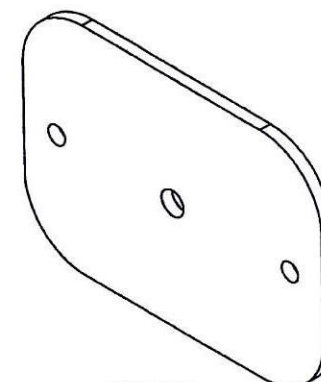
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NOTES: UNLESS OTHERWISE SPECIFIED

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12.
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR: BLACK; PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J TYPE I, CLASS N.
3. DEBURR AND BREAK ALL SHARP EDGES.
4. IDENTIFY IAW MPP-120. LASER ENGRAVE CENTURY GOTHIC, 12 POINT P/N AND REVISION.
- 5 PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 649.5212 BRACKET.SLDPRT, LAST MODIFIED 11-02-11.
- 6 PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 649.5214 BRACKET.SLDPRT, LAST MODIFIED 11-02-11.



REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
1	LAST PROTOTYPE REVISION PER		N/A
2	INITIAL RELEASE	11-02-11	P. BRAVO
3	INCORPORATED ECN 03488	04-17-12	P. BRAVO



649.5210

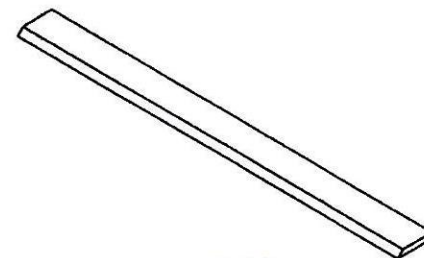
UNINCORPORATED ECN(s)

03696

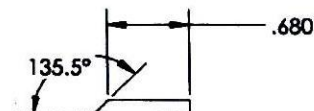
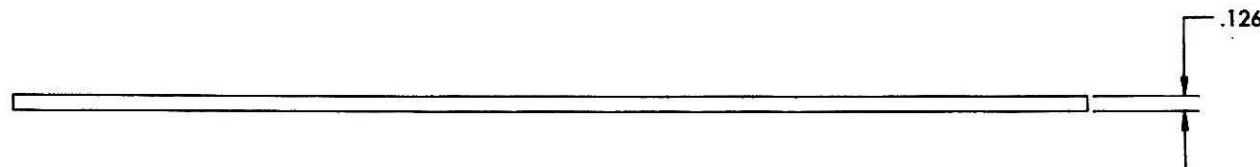
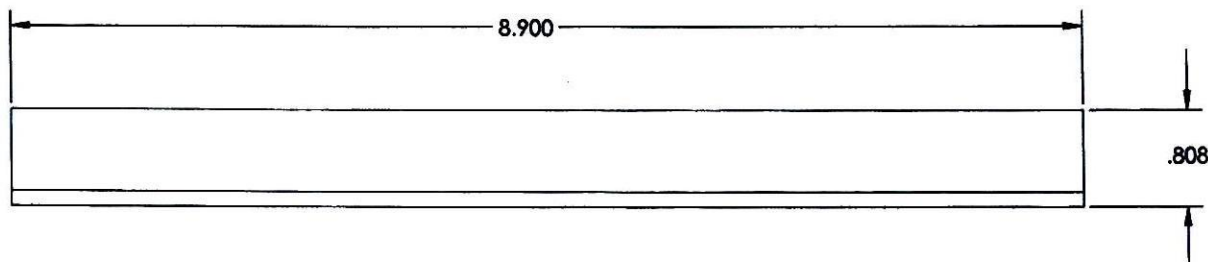
QTY	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.
5		649.5214	BRACKET	△	△△△
4		649.5213	DOUBLER	△	△
3		649.5212	BRACKET	△	△△△
2		649.5211	SHIM	△	△
1		649.5210	DOUBLER	△	△
PARTS LIST					
NEXT ASSY (S)			APICAL INDUSTRIES		
649.4700			2608 TEMPLE HEIGHTS DR.		
			OCEANSIDE, CA. 92056-3512 (760)724-5300		
			BRACKET		
			REV	DATE	REV
			B	07/02/16	A
			SCALE	NONE	SHEET 1 OF 4

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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



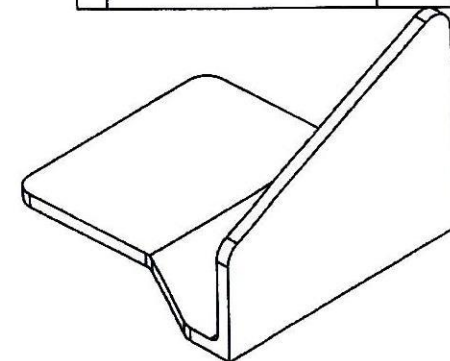
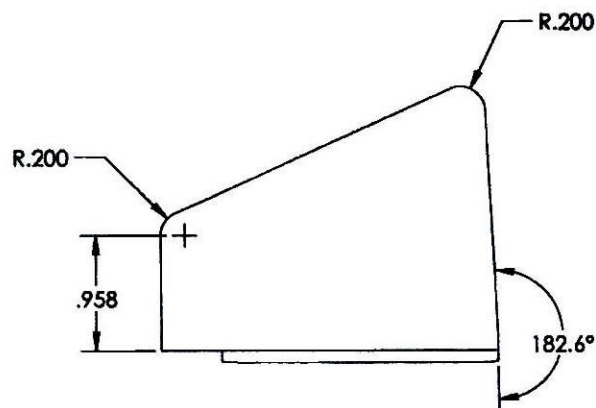
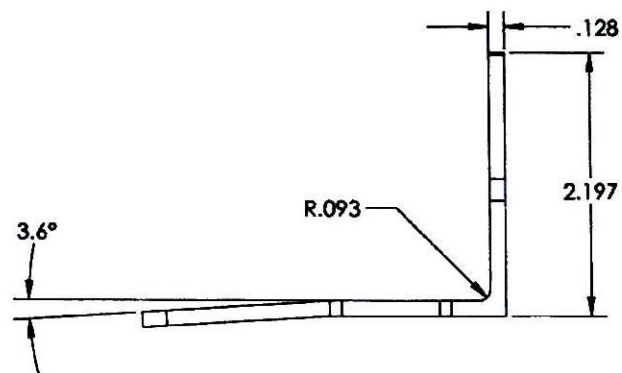
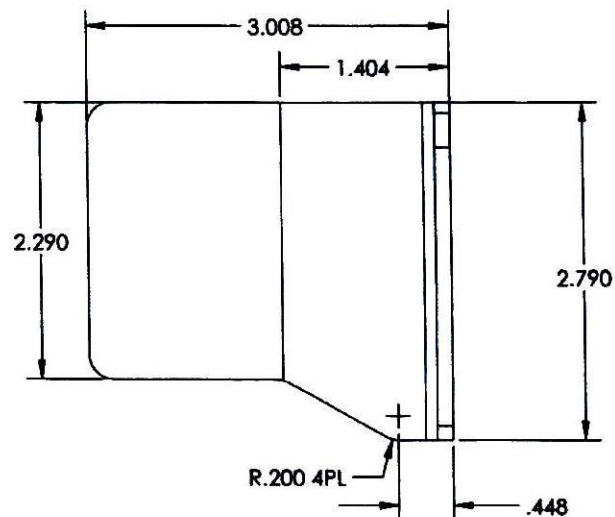
649.5211



ORIGINAL DATE: 11-01-11 DRAWN BY: J. SHAW A. GUNN CHECKED BY: J. SHAW DRAFTER APPROVAL: J. SHAW DATE: 11-01-11 CONTRACT NO.		APICAL INDUSTRIES 2408 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACES DECIMALS ±.01 2 PLACES DECIMALS ±.005 ANGLES ±.5°		CAGE CODE B 07M26	DWG. NO. 649.5200
SCALE: NONE		REV. A	SHEET 2 OF 4

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REV. NO.		DESCRIPTION	DATE	APPROVED

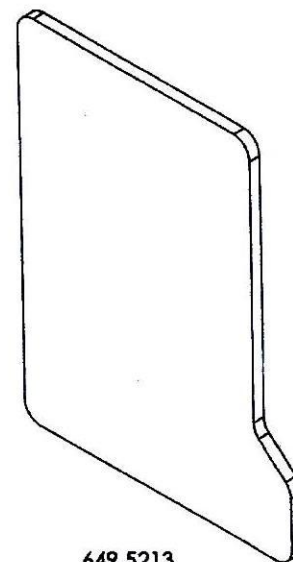
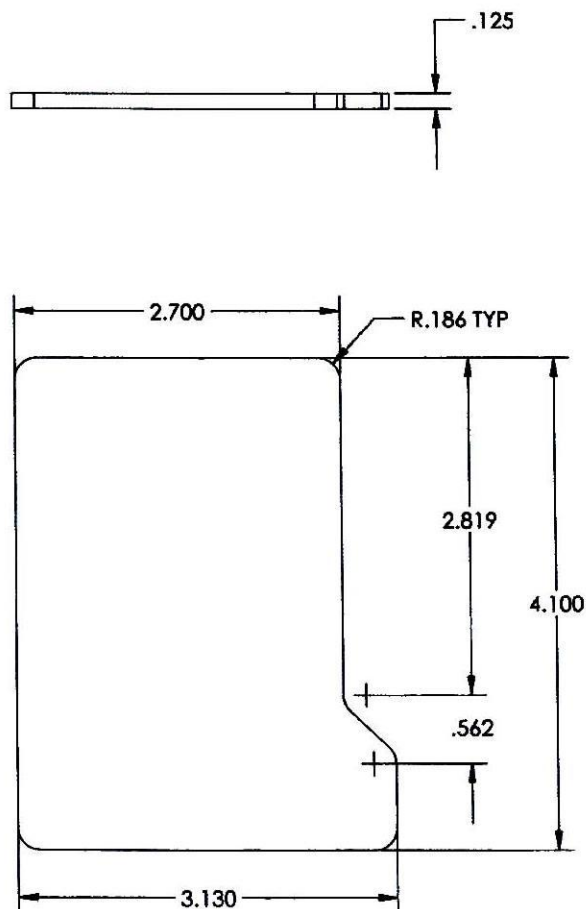


649.5212 SHOWN
649.5214 OPPOSITE

ORIGINAL DATE 11/02/11		APICAL INDUSTRIES	
DRAWN BY A. GIAN		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAYO		BRACKET	
CONTRACT NO.		649.5200	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE 3 PLACE DECIMALS ±.01 ANGLES ±.5°	REV	CAGE CODE	REV
	B	074126	A
	SCALE NONE		SHEET 3 OF 4

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THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

REVISIONS		DATE	APPROVED
REV	DESCRIPTION		



649.5213

ORIGINAL DATE 8/10/00-10		11-02-11	
DRAWN BY A. GIMAN		CHECKED P. BRAVO	
DRAWING APPROVAL 11/02/11			
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ±.01 2 PLACE DECIMALS ±.005 ANGLES ± 5°			
APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300		BRACKET SCALE NONE	
REV	DATE	REV	DATE
B	07/11/26	A	
649.5200		SHEET 4 OF 4	



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO039040

Items										
Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
5	171201	647.3917	Doubler Issue P/O to ATG : HARD ANODIZE, COLOR BLACK, AND PRIME AS PER DWG 647.3900 REV. C	Firmed	2/21/18	8 pcs	0 pcs	8 pcs	\$8.01/pcs	\$64.08
6	171214	649.5213	Doubler ISSUE P/O: _____ HARD ANODIZE, COLOR BLACK AS PER DWG. (SEE NOTE 2)	Firmed	2/21/18	5 pcs	0 pcs	5 pcs	\$7.86/pcs	\$39.30
7	169390	647.7822	Eye Bolt Fitting RH Issue P/O to ATG : 1- Black Anodize as per Dwg 647.7800 Rev. A 2- PRIME AS PER DWG, SEE NOTE #2 Certification of Conformity is required	Firmed	2/21/18	15 pcs	0 pcs	15 pcs	\$10.41/pcs	\$156.15
8	170589	RBE350A94- 3701-00	Main Rotor Rigging Tool -Issue P/O to ATG: -ANODIZE COLOR BLACK, PER IAW MIL-A- 8625F TYPE 2 CLASS 2, Water sealant As per Dwg RBE350A94- 3701-00 Rev. 2A -Certificate of Conformity is required	Firmed	2/21/18	20 pcs	0 pcs	20 pcs	\$6.61/pcs	\$132.20
171677				Firmed	2/21/18	2 pcs	20 pcs	2 pcs	\$6.61/pcs	\$13.22
Sub Total:						22	0	22		\$145.42
9	170065	RBT18713-1	Body -Issue P/O to ATG : PO -ANODIZE COLOR RED, PER IAW MIL-A-8625 TYPE-2 CLASS-2, Water sealant As Per Dwg RBT18713-1 Rev. 4 -Certificate of Conformity is required	Firmed	2/21/18	13 pcs	0 pcs	13 pcs	\$5.13/pcs	\$66.69
10	171523	RBWSI-HT- 12AS-1	Top -Issue P/O to ATG : PO -ANODIZE COLOR RED, PER IAW MIL-A-8625 TYPE-2 CLASS-2, Water sealant	Firmed	2/21/18	10 pcs	0 pcs	10 pcs	\$5.13/pcs	\$51.30

DAS
38
9-89
D/
DAS
9-1
9-89



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 914686

Date: 28-Feb-18

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Diane Baker
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
		OUR TRUCK	
Quantity	Description		
6 ea	Part: 649.5213 Doubler Job: 22547	Rev: A	Line: 6
PO: PO039040			
CERTIFICATE OF CONFORMANCE A.T.G Industries Inc. certifies that all items in this shipment conform to the requirements. Date: <u>28/2/18</u> Certified Signature: <u>[Signature]</u> Receiver Signature: _____ A.T.G Industries Inc. is AS9100 Registered and Nadcap Chemical Processing Accredited. Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt.			
Made in Canada.			